## Features:

- 4 SMA electrical interfaces
- Designed to work with COTSWORKS RJ-5G, RJ-EX/LX/ZX, RJ-TX2 and RJ-RX2 transceivers
- Clampdown feature standard on all boards
- Spring header receptacles for fast and easy transceiver mounting
- Convenient test points for DDMI interface
- Easy to read LED indicators for visual function verification
- Easy access signal detect test points
- Easy access TX Disable D.I.P. switches
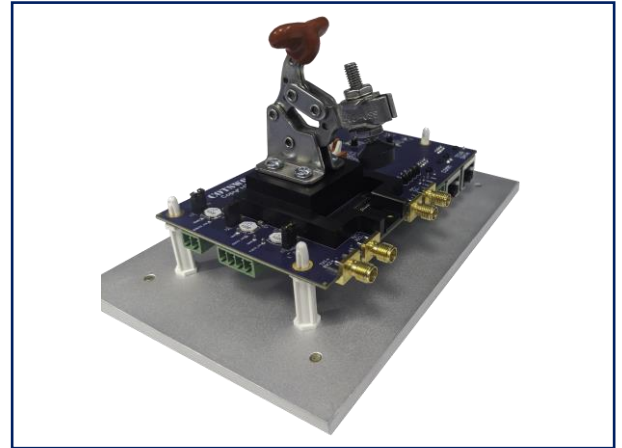
This high performance evaluation board allows for fast and reliable testing without the need for a final board design.

Commercial Aerospace   Military Aerospace   Military Tactical   Industrial Oil & Gas   Military Sensing   Undersea Networking
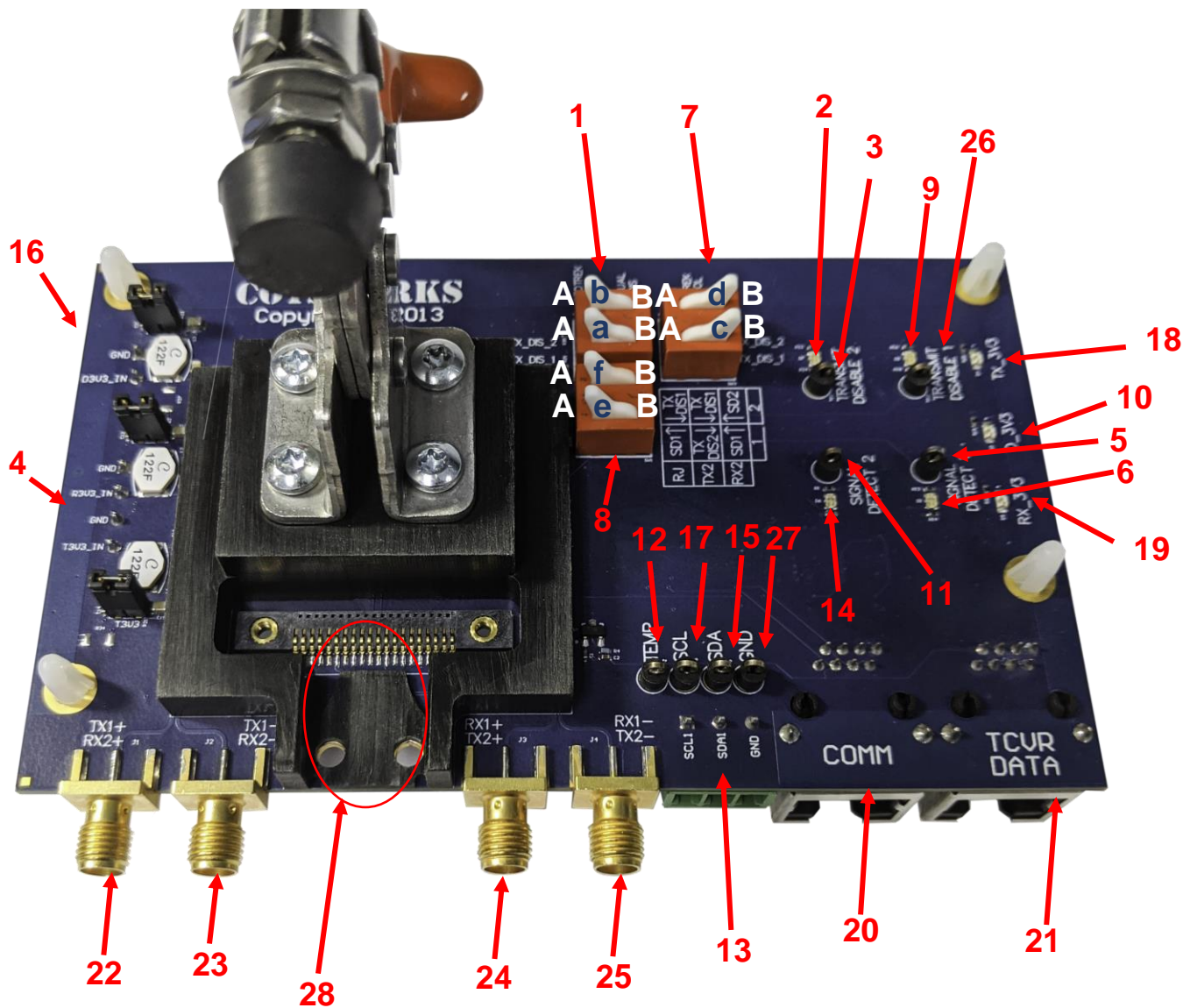
General Description

This electrical interface board is ideal for testing all features of the COTSWORKS RJ-5G transceivers.

RJ-5G transceiver test board is designed to simplify early level testing without having to integrate the transceiver into a host board from pattern generation through electrical connectors.

Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	NOTES
Maximum Supply Voltage	V_{CC}	-	3.47	V	
Storage Temperature	T_{sto}	-55	105	ºC	
Operating Temperature	T_{OP}	-55	105	ºC	

1	TX Disable Switch	**RJ-SX** If switch a is in position A, the transmitter will be enabled. If switch a is in position B, the transmitter will be disabled. **RJ-TX2** If switch a is in position A, the transmitter on channel 1 will be enabled. If switch a is in position B, the transmitter on channel 1 will be disabled. If switch b is in position A, the transmitter on channel 2 will be enabled. If switch b is in position B, the transmitter on channel 2 will be disabled.
2	TX Disable Indicator	The LED will turn red if the transmitter is disabled. This means the TX_DIS pin on the DUT is driven to Vcc. The LED will turn green if the transmitter is enabled. This means the TX_DIS pin on the DUT is driven to GND. *If testing an RJ-TX2, this test point corresponds to TX channel 2.*
3	TX Disable Test Point	This test point can be used to measure the voltage on the TX_DIS pin on the DUT. It can also be used to drive the TX_DIS pin on the DUT. If the test point is connected to GND, the Transmitter will be enabled. If the test point is connected to Vcc, the Transmitter will be disabled. *If testing an RJ-TX2, this test point corresponds to TX channel 2.*
4	Transceiver Power	Connect the supplied 4-pin power cable to 3.3V. Transceiver power is used to power the DUT and does not power the components on the eval board.
5	Signal Detect Test Point	This test point can be used to measure the voltage on the SD pin on the DUT. If the voltage is measured high, the receiver of the DUT is receiving a signal. If the voltage is measured low, the receiver of the DUT is not receiving a signal. *If testing an RJ-RX2, this test point corresponds to RX channel 1.*
6	Signal Detect Indicator	The LED will turn red if the receiver of the DUT is not receiving a signal. The LED will turn green if the receiver of the DUT is receiving a signal. *If testing an RJ-RX2, this indicator corresponds to RX channel 1.*
7	TX Disable Source Control	**RJ-SX** If switch c is in position A, the transmit disable is controlled by the switch at location 1. If switch c is in position B, the transmit disable is controlled by an external source at location 21 or location 3. Switch d should be set to position B. **RJ-TX2** If switch c is in position A, the channel 1 transmit disable is controlled by the switch at location 1. If switch c is in position B, the channel 1 transmit disable is controlled by an external source at location 21 or location 3. If switch d is in position A, the channel 2 transmit disable is controlled by the switch at location 1. If switch d is in position B, the channel 2 transmit disable is controlled by an external source at location 21 or location 3.
8	Configuration Switch	If testing an **RJ-SX**, set switch e to position A and set switch f to position B. If testing an **RJ-TX2**, set switch e to position B and set switch f to position B. If testing an **RJ-RX2**, set switch e to position A and set switch f to position A.
9	TX Disable Indicator	The LED will turn red if the transmitter is disabled. This means the TX_DIS pin on the DUT is driven to Vcc. The LED will turn green if the transmitter is enabled. This means the TX_DIS pin on the DUT is driven to GND. *If testing an RJ-TX2, this test point corresponds to TX channel 1.*

10	**Digital Power Indicator**	The blue LED will turn on if there is 3.3V on the digital power plane supplied from location 16. Digital power is used to power the components on the eval board and does not power the DUT.
11	**Signal Detect Test Point**	This test point can be used to measure the voltage on the SD pin on the DUT. If the voltage is measured high, the receiver of the DUT is receiving a signal. If the voltage is measured low, the receiver of the DUT is not receiving a signal. *If testing an RJ-RX2, this test point corresponds to RX channel 2.*
12	**Temperature Test Point**	This test point can be used to measure the voltage from the temperature sensor on the eval board.
13	**I2C Interface**	If supported by the DUT, communication through the I2C bus can be established through a 3-pin connector in this location.
14	**Signal Detect Indicator**	The LED will turn red if the receiver of the DUT is not receiving a signal. The LED will turn green if the receiver of the DUT is receiving a signal. *If testing an RJ-RX2, this indicator corresponds to RX channel 2.*
15	**SDA Test Point**	If supported by the DUT, communication through the I2C bus can be established through this test point.
16	**Digital Power**	Connect the supplied 2-pin power cable to 3.3V. Digital power is used to power the components on the eval board and does not power the DUT.
17	**SCL Test Point**	If supported by the DUT, communication through the I2C bus can be established through this test point.
18	**TX Power Indicator**	The blue LED will turn on if there is 3.3V on the TX power plane supplied from location 4. TX power is used to power the TX on the DUT. *If Testing an RJ-RX2, this indicator will respond to RX channel 2.*
19	**RX Power Indicator**	The blue LED will turn on if there is 3.3V on the RX power plane supplied from location 4. RX power is used to power the RX on the DUT. *If Testing an RJ-TX2, this indicator will respond to TX channel 2.*
20	**Communication I/O**	A standard OTS Ethernet communication cable with an RJ-45 can be used for communication with the DUT and eval board EEPROM through I2C. Contact COTSWORKS for the pinout details.
21	**Transceiver I/O**	A standard OTS Ethernet communication cable with an RJ-45 can be used for communication with features of the DUT. Contact COTSWORKS for the pinout details.
22	**TX+ Input**	Provide non-inverted input signal for the optical transmitter through a 50Ω SMA cable. Check DUT datasheet for input signal specifications. *If Testing an RJ-TX2, this indicator will respond to TX channel 1.* *If Testing an RJ-RX2, this indicator will respond to RX channel 2.*
23	**TX– Input**	Provide inverted input signal for the optical transmitter through a 50Ω SMA cable. Check DUT datasheet for input signal specifications. *If Testing an RJ-TX2, this indicator will respond to TX channel 1.* *If Testing an RJ-RX2, this indicator will respond to RX channel 2.*
24	**RX– Output**	Non-inverted output signal from the optical receiver. Connect 50Ω SMA cable. *If Testing an RJ-TX2, this indicator will respond to TX channel 2.* *If Testing an RJ-RX2, this indicator will respond to RX channel 1.*

25	**RX+ Output**	Inverted output signal from the optical receiver. Connect 50Ω SMA cable. *If Testing an RJ-TX2, this indicator will respond to TX channel 2.* *If Testing an RJ-RX2, this indicator will respond to RX channel 1.*
26	**Channel 1 TX Disable Test Point**	This test point can be used to measure the voltage on the TX_DIS pin on the DUT. It can also be used to drive the TX_DIS pin on the DUT. If the test point is connected to GND, the Transmitter will be enabled. If the test point is connected to Vcc, the Transmitter will be disabled. *If testing an RJ-TX2, this test point corresponds to channel 1.*
27	**Ground Test Point**	This test point is connected to circuit ground.
28	**DUT connection point**	Connection point for RJ DUT. Place screw posts from DUT inside the through holes on securing fixture, place DUT pins on corresponding pins from 20-pin header on test board, and secure in place with plunger for connection.

Ordering Information

TESTBD-RJ-5SX	-XX
	Plate Option
RJ Transceiver Eval Board	P: Plate Stand Included NP: Plate Stand Not Included

Example part number: TESTBD-RJ-5SX-P [RJ Eval Board configured for low data rates with a plate stand.]
Contact COTSWORKS for mechanical dimensional information and other configuration options.